



·I·C·L·E·I  
Local  
Governments  
for Sustainability



The Climate  
Registry

# Local Government Operations (LGO) Protocol Advisory Group Kick-off Meeting

Call-in number: 800-369-1730

Access code: 20733#

Welcome!

April 22, 2008



# Welcome and Introductions

# Goals and Objectives



# Goals of Joint Effort

- Provide “industry-specific” reporting guidance for local government operations
- Help create harmonization between GHG inventories reported to multiple programs
- Promote role of local governments in combating global climate change
- Advance the consistent, comparable and relevant quantification of emissions



# Partner Objectives

- ARB – California protocol for AB 32 Program
- CCAR members – “industry-specific” guidance for local government members
- ICLEI members – supplementary to International Local Government Greenhouse Gas Protocol
- TCR will look to these standards in the future
- Applicable across US, potentially Canada and Mexico



# GHG Accounting & Reporting

## General Principles

- Relevance
- Completeness
- Consistency
- Accuracy
- Transparency



# Local Government Definition



# Local Government Definition

*Local Government: a general purpose government at the town, city or county level.*

- Protocol is developed specifically for city and county needs
- Guidance may be applicable for other entities (e.g. special districts), but will focus on local government needs
- If program requires reporting under sector-specific guidance, applicable to local governments as defined above only



# Local Government Services



# Local Government Services

## Government Owned/Operated Facilities

- Owned and leased office space
- Police and fire stations
- Recreation centers and facilities, including auditoriums, museums, zoos, other cultural facilities
- Warehouse, fleet and equipment yards, service facilities
- Transportation facilities
- Port and airport facilities and equipment
- Traffic signals, streetlights, utility lighting
- Hospitals and schools
- Courts
- Prisons
- Housing



# Local Government Services

## **Government Owned/Operated Fleet Vehicles**

- Passenger fleet vehicles
- Light, medium, and heavy-duty trucks
- Police and fire equipment
- Transit vehicles
- Sanitation and street sweeping equipment
- Port and airport on and off-road vehicles
- Aircraft and maritime equipment
- Grounds keeping equipment



# Local Government Services

## Government Owned/Operated Industrial Facilities

- Wastewater and potable water conveyance and treatment facilities
- Power generation, transmission and distribution facilities
- Solid waste management facilities, including transfer stations, recycling centers, resource recovery centers, compost facilities and landfills



# Local Government Operations Scopes and Sector Alignment



# Scopes

<b>Scope</b>	<b>GHG Emission Source</b>	<b>Local Government</b>
1	Direct	Owns and operates
2	Indirect	Generated elsewhere for or as a result of Government Operations
3	Direct & Indirect	Exerts some control or influence



# Sector Alignment

Macro Sector (IPCC)		Local Government Sector
Energy	Stationary Combustion	Buildings and Facilities
		Street Lights and Traffic Signals
		Water/Sewer (energy only)
	Mobile Combustion	Vehicle Fleet
		Employee Commute/ Business Travel
	Fugitive emissions	Other



# Sector Alignment

Macro Sector (IPCC)		Local Government Sector
Waste	Solid Waste Disposal	Waste/Wastewater
	Biological Treatment of Solid Waste	
	Incineration and Open Burning of Waste	
	Wastewater Treatment and Discharge	



# Sector Alignment

- **Protocol will include guidance for calculating process emissions**

Macro Sector (IPCC)	Local Government Sector
Industrial Processes and Product Use	Other



# Sector Alignment

- **Protocol is for Sources ONLY, not sinks**

Macro Sector (IPCC)	Local Government Sector
Agriculture, Forestry and Other Land Use	Agriculture Emissions
	Land Use Sources and Sinks

# Sources by Scope



# Sources by Scope

<b>Local Government Sector</b>	<b>Scope 1</b>	<b>Scope 2</b>	<b>Scope 3</b>
Buildings and Facilities	Utility-delivered fuel consumption (e.g., natural gas)  Decentralized fuel consumption (e.g., propane, fuel oil, stationary diesel)	Electricity / heat / steam consumption	Stationary combustion- based emissions and electricity/heat/steam consumption-based emissions and from facilities operated by contracted businesses performing essential government services
Street lights and traffic signals			
Water / Sewer			
Electricity / Heat / Steam Generation	Utility-consumed fuel for electricity / heat generation		



# Sources by Scope

Local Government Sector	Scope 1	Scope 2	Scope 3
Vehicle Fleet	Tailpipe emissions from government owned and operated vehicles	Emissions associated with electric vehicles	Tailpipe emissions from vehicles operated by contracted businesses performing essential services  Upstream/downstream emissions
Employee Commute / Business Travel			Tailpipe emissions associated with government employee travel to and from work and business travel  Upstream/downstream emissions
Other	Fugitive emissions not already accounted for		Upstream/downstream emissions



# Sources by Scope

Local Government Sector	Scope 1	Scope 2	Scope 3
Other	<p>Process and fugitive emissions from industrial processes</p> <p>HV/AC systems and in buildings, fleet, etc.</p> <p>Fire Extinguishers</p>		
Waste	<p>Government owned/operated landfill, incineration, compost and wastewater facilities</p>		<p>Analysis-year emissions from government waste disposed to date</p> <p>Embodied future emissions associated with analysis-year waste generation</p> <p>Upstream/downstream emissions</p>



# Organizational Boundaries



# Organizational Boundaries

- Select a consolidation “approach” and apply consistently across entity
  - Equity share
  - Management Control - Financial vs. Operational Control

## Equity Share

- Report portion of entity’s emissions commensurate with financial ownership (25% ownership = 25% of emissions)

## Management Control

- Report 100% of the emissions from operations, facilities and sources you control, determined by:
  - Financial control
  - Operational control
- No emissions from operations in which you own an interest but have no control (e.g. shareholders)



# Management Control

## Operational Control (Recommended)

- Wholly owning an operation, facility or source
- Authority to introduce/implement operating policies
- Operating lease or operating license = operational control
  - Any lease that is not a capital lease is an operating lease

## Financial Control

- Wholly owning an operation, facility or source
- Consistent with financial accounting standards - asset included if part of your financial accounts
- Retain rights to majority of economic benefits/financial risks
  - Finance or capital lease

# “Core Services”



# “Core Services”

- Group discussed reporting of emissions from “core services”, regardless of control
  - Fire, life and safety services
  - Water/Wastewater services
  - Waste collection services
- Group discussed requiring what might currently be optional “Scope 3” emissions in current CCAR/TCR guidance
  - Employee commuting/business travel
  - Contractor vehicle fleet
  - Emissions from waste generated by local govt.



# Calculation/Estimation Methodologies

**GHG Emissions = Activity Data X Emission Factor**



# Buildings and Facilities

## Recommended Method:

Direct Emissions - CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O

Activity Data	Emission Factor
Fuel purchase records by fuel type*	Default emission factor by fuel type*
	Derived emission factor from on-site source testing, equipment, data, etc.*

\* Appropriate for third-party verification



# Buildings and Facilities

## Alternate Methods:

### Direct Emissions - CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O

Activity Data	Emission Factor
<ul style="list-style-type: none"><li>▪ Fuel estimates based on square footage</li><li>▪ Proxy year data</li></ul>	<ul style="list-style-type: none"><li>▪ Default emission factor by fuel type*</li><li>▪ Derived emission factor from on-site source testing, equipment, data, etc.*</li></ul>

\* Appropriate for third-party verification



# Buildings and Facilities

## Data Sources

- Real Estate Dept.
- Utility provider
- Accounts Payable
- Fuel vendors/suppliers
- Insurance company
- Departmental records
- Facility engineer
- Engineering department



# Buildings, Facilities and Streetlights

## Recommended Method:

Indirect Emissions - CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O

Activity Data	Emission Factor
Metered annual energy consumption*	Utility-specific emission factor*

\* Appropriate for third-party verification



# Buildings, Facilities, and Streetlights

## Alternate Methods:

Indirect Emissions - CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O

Activity Data	Emission Factor
<ul style="list-style-type: none"><li>▪ Estimated annual energy consumption based on square footage*</li><li>▪ Estimated annual energy consumption based on proxy year data</li><li>▪ Installed Wattage (streetlights only)</li></ul>	<ul style="list-style-type: none"><li>▪ Derived emission factor (Local)*</li><li>▪ Default emission factor (Regional)*</li></ul>

\* Appropriate for third-party verification



# Buildings, Facilities and Streetlights

## Data Sources

- Public Works Dept.
- Energy Office
- Utility
- Accounts Payable
- Real Estate Dept.
- Property Management Office



# Fugitive Emissions from Refrigerants

## Direct Emissions: HFCs, PFCs

Activity Data	
Recommended Method	Alternate Method
Equipment inventory + HFCs, PFCs used + annual refrigerant charge + annual leak rates*	Equipment inventory + HFCs, PFCs used

Data Sources	Emission Factor
<ul style="list-style-type: none"> <li>▪HV/AC maintenance</li> <li>▪Accounts Payable</li> </ul>	N/A

\* Appropriate for third-party verification



# Vehicle Fleet

## Recommended Method: Direct Emissions - CO<sub>2</sub>

Activity Data	Emission Factor
Fuel consumption by fuel type*	Default emission factor by fuel type (State-specific)*
	Derived regional emission factor*

\* Appropriate for third-party verification

# Vehicle Fleet

## Alternate Methods: Direct Emissions - CO<sub>2</sub>

Activity Data	Emission Factor
Model year, make, model, fuel type, annual mileage + fuel efficiency from EPA*	Default emission factor by fuel type (National)*
Annual mileage per vehicle type, fuel type + fuel efficiency assumption	
Annual mileage + fuel efficiency assumption	
Fuel estimates based on dollars spent	

\* Appropriate for third-party verification



# Vehicle Fleet

## Recommended Method: Direct Emissions – CH<sub>4</sub>, N<sub>2</sub>O

Activity Data	Emission Factor
Annual mileage, vehicle type, model year, fuel type*	Default emission factor by vehicle type, model year, fuel type*

\* Appropriate for third-party verification



# Vehicle Fleet

## Alternate Methods: Direct Emissions - CH<sub>4</sub>, N<sub>2</sub>O

Activity Data	Emission Factor
Fuel consumption, model year, make, model, fuel type*	Default emission factor by vehicle type, fuel type
Proxy year data	
Fuel consumption + vehicle type, fuel type assumptions	
Annual mileage + vehicle type, fuel type assumptions	
Annual mileage + fuel efficiency assumption	

\* Appropriate for third-party verification



# Vehicle Fleet

## Data Sources

- Mileage reimbursement records
- Maintenance records
- Insurance department
- Fuel tracking system
- Accounts Payable
- Departmental records
- Fuel vendors/suppliers



# Sector-Specific Methodologies

- Formed Subgroups
  - Solid Waste
  - Wastewater
  - Reporting/Metrics
- Presented in Second Draft Protocol

# Fiscal Year Reporting vs. Calendar Year Reporting



# Reporting

- **Fiscal Year**
  - 365-days important
  - No standardization
  - Data availability/accessibility
- **Calendar Year**
  - International reporting standard
  - Achieve consistency
  - 3<sup>rd</sup>-party verifiable



# Advisory Group Questions



# Advisory Group Questions

## Local Government Definition

- Inclusion of special districts?

## Organizational Boundaries

- Agree with recommending operational control?
- Do local governments have operational and/or financial control over all departments?
  - Municipal utilities, ports, airports, redevelopment agencies with separate budgets, Board of Directors

## Calculation/Estimation Methodologies

- Require standardized approach?
- Include one recommended method per sector?
- Provide alternate estimation methods?



# Advisory Group Questions

## Reporting

- Recommend calendar year rather than fiscal year?
- Provide options or require one reporting method?
- Should ARB require registering emissions?

## General Comments

- Additional recommendations?



# LGO Protocol Development Timeline



# Tentative Timeline

ARB Public Workshop in Sacramento	March 11, 2008
CCAR Workgroup & Subgroup Meetings	March/April, 2008
ARB Advisory Group Kick-off Meeting	April 22, 2008
1 <sup>st</sup> Draft Protocol to Advisory Group	Mid-May, 2008
Comments Due	May 30, 2008
2 <sup>nd</sup> Draft Protocol to Advisory Group	Mid-June 2008
ARB Public Workshop	Mid-June, 2008
Public Comment Period	June/July, 2008
LGO Protocol Finalized	August 2008



# Websites

- “Protocol in Progress” information available on CCAR website:  
[www.climateregistry.org/tools/protocols/protocols-in-progress/local-government](http://www.climateregistry.org/tools/protocols/protocols-in-progress/local-government)
- ARB Local Government website:  
[www.arb.ca.gov/cc/protocols/localgov/localgov](http://www.arb.ca.gov/cc/protocols/localgov/localgov)
- ICLEI website:  
[www.icleiusa.org](http://www.icleiusa.org)



# Contacts

## ARB

Dana Papke  
Staff Lead, LGO Protocol  
(916) 324-9615  
[dpapke@arb.ca.gov](mailto:dpapke@arb.ca.gov)

Webster Tasat  
Manager, Emission Inventory  
Analysis  
(916) 323-4950  
[wtasat@arb.ca.gov](mailto:wtasat@arb.ca.gov)

## CCAR

Rachel Tornek  
Senior Policy Manager  
(213) 891-1444 x109  
[rachel@climateresistry.org](mailto:rachel@climateresistry.org)

## ICLEI

Garrett Fitzgerald  
Director of Programs  
(510) 844-0699 x306  
[garrett.fitzgerald@iclei.org](mailto:garrett.fitzgerald@iclei.org)